



الهيئة العامة للطيران المدني
General Authority of Civil Aviation

Published Every 2 Months By The
General Authority of Civil Aviation, Kingdom of Saudi Arabia

CIVIL AVIATION

Issue 80, January 2014, Rabia I 1435



**Aviation Development
Strategy is in its
Final Stages**



Bombardier's CSeries Jet, a New Game of Challenge



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KKIA Riyadh: a Huge Leap Ahead

King Khalid International Airport (KKIA) in Riyadh, is thirty years old today. Its passenger capacity rose up from few millions to almost 18 million passengers last year which far exceeds its original capacity. This led GACA to set a comprehensive program for airport development and expansion to cope with the increasing numbers of passengers year after year on both the domestic and international levels.

Last May H.H. the President of GACA signed a contract with a joint venture company composed of a national company and the Turkish TAV, a leader in Airport construction and management. The scope of work includes completion of part of the Airport Development Project (Phase 1 consisting of Terminal 5 construction (a New Terminal) which will be designated solely for domestic flights. Upon its completion in 2015, the New Terminal's capacity will be 12 million passengers.

Immediately after completion and transfer of domestic flights to T5, development works will commence in both Terminals 3 and 4 in addition to upgrading work of runways, taxiways, aprons, loading centers, and roads network. Phase 2 of the project includes the development and expansion of both Terminals 1 and 2 and the airside area in between.

At the end of Phase 1, in 2017, the Airport will be ready with its five terminals to accommodate 35 million passengers annually qualifying it to become a hub airport linking east and west making Riyadh a popular destination for tourism, medical treatment, and education in addition to being a destination for trade, industry and diplomacy.

This Project and other existing and future

projects are all part of a well thought strategy adopted by GACA aiming to upgrade the Kingdom's air transport infrastructure. Indeed, modern advanced airports represent the spinal cord and basic elements of an advanced aviation industry. On the other hand, GACA is well aware that taking care of its human resources is an integral part of this comprehensive strategy. Accordingly, GACA saves no effort in training its manpower at the national and international levels on systems and techniques that enhance the development of their performance and improve their productivity using clear performance indicators and modern assessment programs.

The other solid factor is the organizational and legislative environment which GACA strives to develop, expand, and support to be a basis for building rewarding investments in this industry which proved to be so influential on the world economies. This includes continuous coordination with other related government bodies such as the Saudi Commission for Tourism & Antiquities, Governorates of Regions, and Chambers of Commerce & Industry.

All these efforts are crowned by the great support GACA receives from the wise leadership of our beloved Kingdom which believes in Air Transport Industry as a vital feeder to our economy and an advanced means for the welfare of our citizens, guests, and visitors.

Finally we would like to thank His Highness the President of GACA, Prince Fahd Bin Abdullah, for his close follow up, direction, and keenness to make GACA's achievements always up to expectations ■

* VP, General Authority for Civil Aviation

Prince Fahd in Dubai Airshow 2013: “SR 4 billion allocated for Domestic Airports Development”



H His Highness Prince Fahd Bin Abdullah, President of the General Authority of Civil Aviation (GACA), announced that more than 4 billion Saudi Riyals will be allocated for the construction and development of domestic airports, some of which will even be upgraded to accommodate international flights.

He further explained that this fund doesn't cover the four international airports in Riyadh, Jeddah, Dammam, and Madina

which are currently experiencing huge development projects that can fairly be classified as new airport projects. This press statement was delivered by His Highness in NAS AIR stand in Dubai Airshow 2013. His Highness added that NAS AIR is one of our national carriers, and we are really proud of. It has recently changed its identity and improved its services with the introduction of Business Class.

On the other hand, NAS AIR approved its ambitious new

strategic plan that aims to attract 20 million passengers by 2020 and to enter a new stage in its history. In its new strategic plan launching ceremony organized in Riyadh on 12/11/2013, the Airline announced a complete upgrade of its aviation operations, adopting a new logo with a distinctive scheme, and revealed the introduction of the Business Class as from Jan 2014 which will provide excellent state of the arts services.

Aviation Development Strategy is in its Final Stages

His Highness Prince Fahd Bin Abdullah, President of GACA (said in an inspection tour around New KAIA Airport on 5/12/2013 accompanied by the Minister of Planning, Dr. Mohammed Al-Jasir), that the Civil Aviation Sector's Development Strategy which was approved by the Council of Ministers is coming to close. He added that the Minister of Economy & Planning, and the Minister of Finance, Dr. Ibrahim Al-Assaf, are members in the committee formed in compliance to the directions of the Custodian of the Two Holy Mosques, King Abdullah Bin Abdulaziz, to supervise the huge projects



execution. He commended the Ministerial Committee's quick response which played a significant role in facilitating the construction of tremendous projects such as New KAIA Airport. His Highness thanked both Minis-

ters of Finance, and Economy & Planning for their effective contribution to this matter. Dr. Al-Jasir commended the achievements accomplished so far in the New KAIA Airport Project construction.

For the 3rd time, Saudi Arabia is a member in ICAO/ ANC

Saudi Arabia has been re-elected for the membership of the ICAO Air Navigation Commission (ANC) for the next triennium (2014-2016) for the third consecutive time.

The ANC elections took place during the second meeting of the 200th session of the ICAO Council where (19) Commissioners including Eng. Adel Alaufi, from Saudi Arabia, were elected via secret ballot.

The Air Navigation Commis-

sion is the technical advisor for the ICAO Council, which manages fifteen expert groups (panels), each of them specializing in a technical subject related to international aviation regulations. The ANC is responsible for the establishment, defining of the work program and reviewing the deliverable materials from each panel, as well as presenting the final version to the council for approval.

It is worth mentioning that the Saudi candidate received

all the 36 votes of the Council members who had the right to vote, which reflects the outstanding, prestigious and well-deserved position of the Kingdom in such an important international forum, and the great attention given to the civil aviation sector by the Government of Saudi Arabia, as well as the outstanding efforts by His Highness Prince Fahad bin Abdullah President of GACA to the ongoing development of this important sector.

Incheon Airport Begins \$4.6 Billion Expansion

Incheon Airport has embarked on a \$4.6 billion expansion to increase its passenger handling capacity 41 per cent by 2017.

The South Korean Government-owned airport has joined rivals such as Singapore Changi Airport in expanding to capitalize on increased air traffic in Asia. Incheon is also looking to accommodate the expected influx of people arriving for the 2018 Winter Olympic Games, being held in South Korea's Pyeongchang County.

Incheon currently ranks ninth worldwide in international passenger traffic and second in cargo. Economic growth in the region is expected to in-



crease by an average of six per cent in the coming years, compared with a world average of four per cent. The expansion also includes boosting annual cargo capacity to 5.8 million tons from 4.5 million.

On Thursday 26 September 2013, the airport held a groundbreaking ceremony for a second terminal which is capable of accommodating 18 million passengers per year, bringing total capacity to 62 million.

Airline Profits to Continue Growth in 2014

IATA has revised its 2013 global industry outlook downwards to \$11.7 billion on revenues of \$708 billion. Airline performance continued to improve in the second quarter of 2013, but at a slower pace than expected with the previous projection in June 2013 of \$12.7 billion. This reflects the impact on demand of the oil price spike associated with the Syrian crisis and disappointing growth in several key emerging markets.

Performance in 2013 is considerably better than the \$7.4 billion net profit of 2012. The upward trend should continue

into 2014 when airlines are expected to return a net profit of \$16.4 billion. This would make 2014 the second strongest year this century after the record breaking \$19.2 billion profit in 2010.

Cargo growth has not materialized; emerging markets have slowed; and the oil price spike has had a dampening effect. We do see a more optimistic end to the year. And 2014 is shaping up to see profit more than double compared to 2012."

Airline performance remains strong. This year, airlines are expected to post the same op-

erating margin (3.2 per cent) as in 2006, even with a 54 per cent hike in jet fuel prices. The industry has been able to absorb this cost increase as a result of changes in the industry structure (through consolidation and joint ventures), increased ancillary sales and reduced new entry due to tight financial markets. Moreover, the industry is expected to have a relatively good year even with global economic growth at two per cent (previously 2.0 per cent gross domestic product growth was considered the point below which airlines posted losses).

Bombardier's CSeries Jet, a New Game of Challenge

by:

Eng. Ahmed Nada* & Eman Atallah**

For more than 15 years, the world was amazed by the game of challenge between the two giants of the aircraft industry: Airbus and Boeing. People were always fascinated by the new planes that the companies were producing. However, the game was about to change after the world witnessed the successful first flight of the Bombardier CSeries aircraft.

On the 16th of September, 2013 at 9:55 am, around 3,000 employees, suppliers and invited guests cheered as the new Bombardier CSeries aircraft CS100 took off the runway at Mirabel airport, north of Montreal, Canada. The jet stayed in the air for two and a half hours and reached an altitude of 3,800 metres and a speed of 425 km/h. "The performance of the CSeries aircraft was very impressive! We couldn't have wished for a better maiden flight," said Captain Ellis, Chief Flight Test Pilot at Bombardier Flight Test Center. Bombardier promises that the CSeries jet, which is made of lightweight but strong composite materials, will be quieter, lighter and more fuel-efficient than existing commercial jets. Bombardier's largest aircraft, amazed the attendants when it took off, because of its very quiet but powerful

engines. "Some of the people actually missed the beginning of the flight," said Rob Dewar, Vice-President and general manager of the CSeries program.

The Canadian manufacturer, Bombardier, has been working on the CSeries project for almost 10 years. In July 2004, Bombardier announced the development of the CSeries family of airliners. In March 2005, the company announced two models: the CS100 with layouts from 110–125 seats, and the CS300 with layouts from 130–160 seats. In May 2005, Bombardier secured agreements with the federal government of Canada, the provincial government of Quebec, and the government of

the United Kingdom for support and loans for the CSeries project. The Canadian government has committed US\$350 million and the government of Quebec committed an additional US\$118. The UK government has also committed US\$300 million to finance the project. On January 31st 2006, Bombardier announced that it would not go forward with plans to develop the CSeries and it would keep only a small team of roughly 50 employees to work on the project. In January 2007, Bombardier announced that they will resume the hard work on the project, and after 10 months they announced that they will be using the Pratt & Whitney geared



CS100 & CS300



Turbofan as the exclusive power plant for the CSeries.

The hard work on the project continued while airlines started to make agreements for the CSeries planes. The program is trending towards a cost of US\$3.4 billion in total and has employed about 800 engineers and design officials. The investment comes from Bombardier and its shareholders, CSeries suppliers and repayable contributions from the governments of Canada, Quebec and The UK. The CSeries aircraft family combines advanced materials, leading-edge technologies and proven methods to meet commercial airline requirements. Bombardier plans to deliver the CS100 planes by the middle of 2014, and the CS300 are expected to follow.

The CSeries project paved the way for Bombardier to directly challenge Boeing and Airbus for the first time. The CSeries is competing with the B737 MAX, A318, A319, and E195. The plane's Pratt & Whitney

turbofan engine uses a complex gear to spin the front and the rear sections at different speeds, thus burning less fuel. Bombardier says the CSeries jets will burn 20% less fuel than a similar sized plane currently in service. The CSeries aircraft contain 70% advanced materials comprising 46% composite materials and 24% aluminium-lithium which allows for a 15% lower seat-mile cost and a significant reduction in maintenance costs. The modern geared turbofan engine reduces the noise emission of the aircraft dramatically, which makes the aircraft very quiet. In fact, the CSeries jets are considered to be the ideal aircrafts for urban operations, with an unmatched environmental scorecard, including the lowest noise levels of any commercial aircraft in production. The CSeries aircraft will use the Rockwell Collins Pro Line Fusion avionics suite, an integrated cockpit system which incorporates 15 inch displays, with comprehensive navigation, communications, surveillance,

engine indication and crew alerting system (EICAS), and aircraft maintenance systems. The plane will also contain larger storage bins for each passenger, more headroom, larger windows and wider aisles than the competitors' airliners. Bombardier is also planning to build larger planes, in the future, based on the CSeries aircrafts to further challenge the competition.

It was a special day for Bombardier when the CSeries aircraft completed a historic first flight, thus writing a new chapter in the history of aviation. The CSeries is the most ambitious project in Bombardier's 27-year aviation record and the first major Canadian-designed aircraft since the Avro Arrow. Airlines are recognising the advances and the improved efficiencies, both in fuel consumption and maintenance, that the CSeries will have and hence, many firms have ordered the new CSeries planes. As of December 4th 2013, the total firm orders reached 182, including 63 CS100 and 119 CS300 aircrafts, and Bombardier expects the number to reach 300 planes by the time the CSeries boards its first commercial passenger. With the cost and noise reduction that the CSeries aircrafts are promoting, there will definitely be an environmental revolution ■

References:

bombardier.com , cseries.com , cbc.ca , ctvnews.ca , globalnews.ca

* Engineer at Ericsson -Canada

** Concordia University Graduate -Canada

The Use of PEDs on Board According to ICAO

On 31 October, 2013, the U.S. Federal Aviation Administration (FAA) announced that it had determined that U.S. airlines could safely expand passenger use of Portable Electronic Devices (PEDs), in their “flight mode” during all phases of flight, and was immediately providing the airlines with implementation guidance. The FAA based its decision on input from a group of experts that included representatives from the airlines, manufacturers, passengers, flight and cabin crewmembers, and the mobile technology industry. The FAA is also streamlining the approval of expanded PED use by giving airlines updated, clear guidance. This FAA tool will help airlines assess the risks of potential PED-induced avionics problems for their airplanes and specific operations. U.S. Airlines will evaluate avionics as well as changes to stowage rules and passenger announcements. Each airline will also need to revise manuals, checklists for crewmember training materials, carry-on baggage programs and passenger briefings before expanding use of PEDs. Each airline will determine how and when they will allow passengers broader use of PEDs. Please note that the use of cell phones in-flight will still be prohibited.

By the end of November, the European Aviation Safety Agency (EASA) will also issue guidance allowing passengers to use PEDs during taxiing, take-off and landing. The move, which applies to



By: **Talal M. B. Kabli***

devices such as tablets, smart-phones, eReaders and MP3 players, follows the similar decision by the FAA. The changes above will be applicable to aircraft operated by European airlines. With the new guidance an airline, following its own assessment, will be able to allow passengers to use their PED in ‘Flight Mode’ during all phases of flight.

While ICAO Secretariat is very confident in the safety case supporting the decisions by the FAA and EASA, there is also a belief in the need for a globally harmonized approach toward the use of PEDs. It is important to note that ICAO does NOT have any Standards, Recommended Practices or Procedures that address the use of PEDs in flight. In the future, many States may wish to authorize the use of PEDs on their airlines and may need additional guidance concerning measures to allow the safe use of these devices in flight. In the absence of a globally harmonized approach, there is also a high likelihood of confusion among the international

travelling public when faced with varying PED usage procedures allowed by States. This could become particularly unclear for passengers when flying international using code-share or alliance airline partners. While this issue has been already discussed in the ICAO Cabin Safety Group, in light of the recent developments, the ICAO Secretariat now sees this as very much as a multi-disciplinary issue involving air worthiness, flight operations and cabin safety areas and a concern that requires a close coordination between States and industry.

ICAO has already conducted several informal discussions with IATA on this subject and they expressed the same concern. On Wednesday, 27 November 2013, the ICAO Secretariat has organized an informal, multidisciplinary meeting with the regulators that have already begun to authorize the use of PEDs during all phases of flight, IATA and other stakeholders. In the very near term, best practices will be identified and made available to all Member States, likely through an Electronic Bulletin. In the mid- to long-term, ICAO should consider the need for the development of guidance material, or possibly higher level ICAO provisions, to provide uniform guidance for States and, in turn, a harmonized approach for industry and ultimately the travelling public ■

* Permanent Representative of Saudi Arabia On the Council of ICAO

IATA CALLS FOR FASTER TRAVEL THROUGH AIRPORTS BY 2020

IATA director general and CEO, Tony Tyler, outlined his hopes for 'hassle-free' airport journeys by 2020.

"A smooth and hassle-free journey where passengers do not have to break their stride from the kerb to the gate unless they choose to, is the goal," said Tyler, speaking at the opening of the World Passenger Symposium in Dublin.

"That would deliver tremendous value to passengers and our vision is to work with our airport and technology partners to make it a reality by 2020."

Tyler noted how the Fast Travel programme, which provides self-service options for key processes like



check-in and self-boarding, would help deliver the concept.

"We are in the mass implementation phase of the Fast Travel programme," he said, adding that 45% of passengers would be able to use the service by the end of 2015.

He also advocated a risk-based security model that uses information provided to governments by airlines to help make assessments

about travellers.

IATA continues to work on improving security and claims its first generation Checkpoint of the Future is expected to be deployed in at least two airports in 2015.

Tyler added: "IATA is also working with ACI to make Wi-Fi connectivity more widely available at airports around the world, which will add value to the customer experience."

Near-field communication technology is also supported, as it would help passengers to use tap-and-go functionality at various points in the airport, as well as better connectivity with travel suppliers.

BOEING, KOREAN AIR FINALIZE ORDER FOR 12 TWIN-AISLE AIRPLANES

Boeing and Korean Air have finalized an order for five B747-8 Intercontinental and six B777-300ER jetliners that was announced as a commitment during the Paris Air Show in June.

In addition, Korean Air has also announced an order for one additional B787 Dreamliner. The value of the combined order is valued at USD 3.9 billion at current list prices.



B787 and A350: Similarities and Differences

It is not unfamiliar to see similarities between two airplanes produced by two competing companies. In the automobile world, most companies produce similar types, though some features may be different.

In general, both airplanes are long-range, wide-body, twin-engine jet airliners. The primary material in the construction of their airframe is carbon fiber-reinforced polymer composite. The two planes differ in seat capacity. Depending on variant, the B787 can carry between 240-330 passengers, while the A350 can carry between 270-350 passengers in a typical three-class seating layout. Thus they are both of mid-size as compared with jumbo airplanes. Both airplane employ fly-by-wire flight control system. These flight controls replace traditional cables and hydraulics with computers and electronic signals. They save weight, increase safety and improve reliability. High performance military fighter jets have long used fly-by-wire technology.

The B787 entered service in October 2011, where until October 2013, 98 units were built, while the first batch of the A350 is expected to be delivered in mid-2014. As of October 2013, the B787 has achieved 982 firm orders from 58 customers since 2004, while the A350 has attained



By Prof. Mahmoud
Nadim Nahas*

764 firm orders from 39 customers since 2006.

The launch customer for the B787 is Japan's All Nippon Airways, with firm order of 50 aircraft. The delivery of aircraft to All Nippon Airways started in 2011, while delivery to All Nippon Airways, Ethiopian Airlines, Qatar Airways, and some others started in 2012. Delivery to other carriers is still on in 2013, while delivery to Singapore Airlines will be during 2018-2019.

The launch customer for the A350 is Qatar Airways, which ordered 80 aircraft of all three variants. The company with the highest order is International Lease Finance Corporation (ILFC). Emirates, US Airways and Hawaiian Airlines are among other big customers.

The unit price of the B787 is between US\$212-289 whereas the A350 is priced between US\$255-332 depending on the variant of each. The variants

of the Dreamliner are named B787-8, B787-9 and B787-10, and those of the Airbus are called A350-800, A350-900 and A350-1000. Variants of each of them differ in the length of the fuselage, hence in the number of seats, the overall weight, the engine thrust and the flight range.

Although Boeing has designed the B787 to be fuel-efficient (it is 20% more fuel efficient than the Boeing B767) Airbus claims that the A350 will be more fuel-efficient and has operating costs up to 8% lower than the B787.

At the beginning of the B787 program Boeing claimed that the B787 would make a serious threat to the Airbus A330. But Airbus stated that the B787 was just a reaction to the A330. Later however, Airbus started seriously thinking of having an improved variant of the A330, with features similar to those of the B787. But then Airbus announced that the airplane will be an entirely new design called A350. This move came as a response to requests from big airlines companies who threatened that Airbus would risk losing the market to Boeing unless a new design is proposed.

The new design is of a very wide body which allows a 10-abreast seating configuration in the economy class cabin, whereas the A330 ac-

commodates eight passengers per row, while the B787 can accommodate 8-9 passengers per row.

Regarding other technical specifications, the overall length of the B787 is between 57-68 m (according to variant), its fuselage width is 5.5 m, its overall height is 17 m, its wing span is 60 m and its wing area is 325 square meter. As for the A350, the overall length is between 60-74 m, its fuselage width is 6 m, its overall height is 17 m, its wing span is 65 m and its wing area is 443 square meter.

The maximum takeoff weight of the B787 is between 228-251 tons, and its maximum fuel capacity is between 129-139 cubic meter, whereas the maximum takeoff weight of the A350 is between 259-308 tons, and its maximum fuel capacity is between 129-156 cubic meter.

Concerning the cruise speed, it is 913 km for the B787 at an altitude of 35,000 ft, while it is 900 km for the A350 at an altitude of 40,000 ft. The maximum range

(with passengers and baggage) for the B787 is between 13000-15700 km, whilst it is between 15000-19000 km for the A350.

The two engines for the B787 are either General Electric GENx-1B or Rolls-Royce Trent 1000 of maximum thrust capability between 280-340 kN, but the A350 has chosen the



B787



A350

Rolls-Royce RR Trent XWB giving maximum thrust between 351-431 kN.

In conclusion, are the two planes similar? Or is the competition between the two companies let the specialists compare between their planes? From the technical specifications it is clear that the comparison is not that accurate. In reality, if there is a comparison, the largest variant of the Boeing, B787-10, can be compared with the smallest vari-

ant of the Airbus, A350-800, where the technical specifications of these two are near each other. On the other hand, the A350 can be compared with the Boeing B777, while the Boeing B787 can be compared with the Airbus A330. United Airlines have decided to buy from both of B787 and A350. This means they will fly different routes, due to the fact that they differ in their range ■

* Aeronautical Engineering Specialist

European Low Fares Airline Statistics 2012

(1/3) By PAX

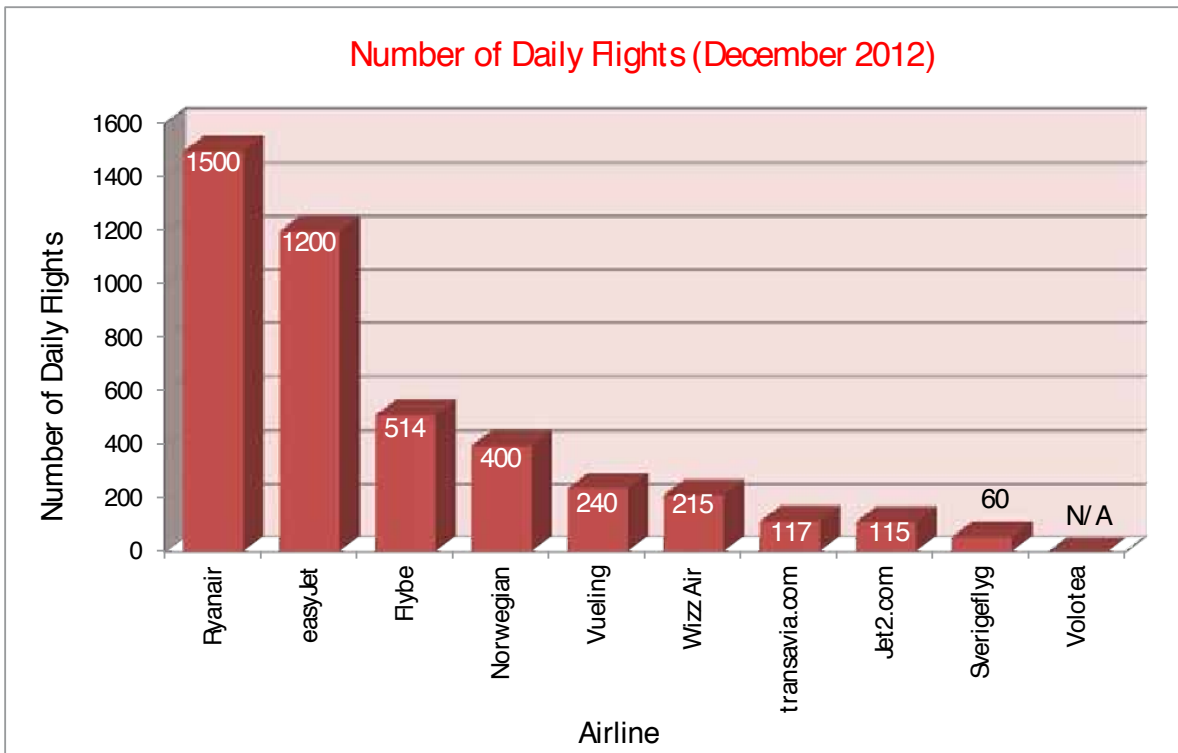
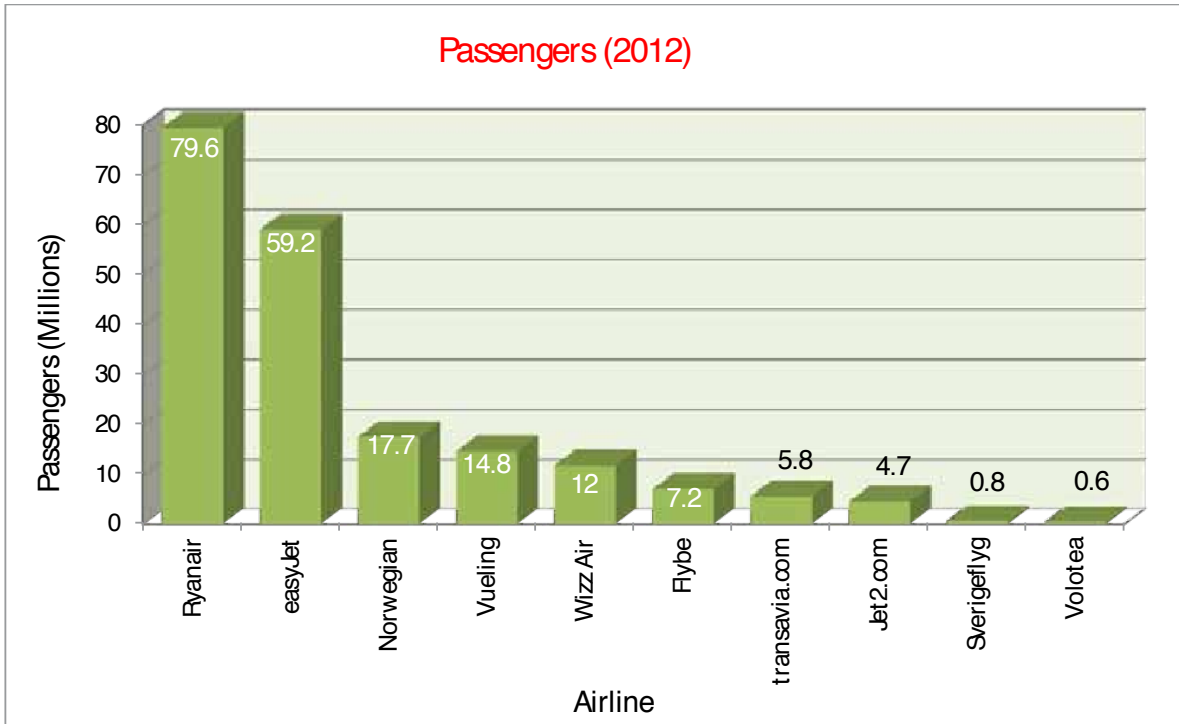
Airline	Country	Passengers (Millions) 2012	Average Load Factor (%) 2012	Number of Daily Flights December 2012
Ryanair	Ireland	79.6	82.0	1500
EasyJet	United Kingdom	59.2	88.9	1200
Norwegian	Norway	17.7	80.0	400
Vueling	Spain	14.8	77.7	240
Wizz Air	Hungary	12.0	85.7	215
Flybe	United Kingdom	7.2	57.7	514
transavia.com	The Netherlands	5.8	89.8	117
Jet2.com	United Kingdom	4.7	88.4	115
Sverigeflyg	Sweden	0.8	73.0	60
Volotea	Spain	0.6	N/A	N/A
Total		202.4	83.2%	4,361

(2/3) By Countries Served (December 2012)

Airline	Countries Served	Destinations	Full Time Employees
EasyJet	33	137	8446
Norwegian	33	125	2550
Wizz Air	29	83	1500
Ryanair	28	174	8500
transavia.com	25	112	1218
Jet2.com	22	54	1885
Vueling	18	58	1692
Flybe	15	73	3300
Volotea	9	54	230
Sverigeflyg	8	20	140

(2/3) By Fleet (December 2012)

Airline	Number of Aircraft	Average Fleet Age	Fleet Type
Ryanair	305	3.0	305 x B737-800
EasyJet	213	4.0	56 x A320, 157 x A319
Flybe	98	4.6	12 x Embraer 190, 14 x E195, 2 x E170, 9 x E175, 47 x Bombardier Q400, 2 x ATR42, 12 x ATR72
Norwegian	69	6.0	60 x B737-800, 9 x B737-300
Vueling	53	7.8	51 x A320, 2 x A319
Jet2.com	43	21	11 x B757-200, 28 x B737-300, 4 x B737-800
Wizz Air	39	3.3	39 x A320-200
transavia.com	31	8.5	21 x B737-800, 10 x B737-700
Sverigeflyg	10	16.1	4 x Saab 340, 2 x Saab 2000, 3 x ATR72/500, 1 x BAE/ATP
Volotea	9	N/A	9 x B717
Total	870	5.2	-



Source: ELFAA

Forthcoming Aviation Conferences, Exhibitions & Seminars

15 January – 15 March 2014

16 January

Kennedys Aviation Seminar
Dublin, Ireland
aeropodium.com/kennedys.html

16 - 18 January

Bahrain International Airshow
Sakhir Air Base, Kingdom of
Bahrain
[bahraininternationalairshow.com/
public/](http://bahraininternationalairshow.com/public/)

21 - 22 January

MRO Latin America Conferences
Rio de Janeiro, Brazil
[aviationweek.com/current/mla/
index.htm](http://aviationweek.com/current/mla/index.htm)

AVM Summit Europe

London, UK
avm-summit.com/europe/

21 - 23 January

16th Annual Global Airfinance
Conference
Dublin, Ireland
[euromoneyseminars.com/
EventDetails/0/5667/16th-Annual-
Global-Airfinance-Conference-
Dublin.html](http://euromoneyseminars.com/EventDetails/0/5667/16th-Annual-Global-Airfinance-Conference-Dublin.html)

26 - 28 January

Air Service Data Seminar
Albuquerque, NM, USA
aci-na.org/event/3201

26 - 29 January

25th Annual AAAE/Southeast
Chapter AAAE Airport Finance &
Administration Conference
Orlando, FL, USA
[events.aaae.org/sites/140102/index.
cfm](http://events.aaae.org/sites/140102/index.cfm)

29 January

AAAE/ACC Airport Technologies
Workshop
Orlando, FL, USA
[events.aaae.org/sites/140104/index.
cfm](http://events.aaae.org/sites/140104/index.cfm)

29 - 31 January

Media Relations Seminar
Albuquerque, NM, USA
aci-na.org/event/3202

30 January

Business Aviation Regional Forum
Boca Raton, FL, USA
[web.nbaa.org/events/
forums/20140130/](http://web.nbaa.org/events/forums/20140130/)

31 January

6th International Aircraft
Repossession Conference
Chandigarh, India
[aeropodium.com/aircraftrepointia.
html](http://aeropodium.com/aircraftrepointia.html)

3 - 4 February

Aviation Safety Culture
Dubai, UAE
[aviationsafety.ae/Programme_day_
two.html](http://aviationsafety.ae/Programme_day_two.html)

3 - 5 February

CANSO Middle East Conference
Amman, Jordan
[canso.org/
middleeastconference2014](http://canso.org/middleeastconference2014)

3 - 6 February

2nd Annual Transport
Infrastructure East Africa
Maputo, Mozambique
landtransportmozambique.com/

4 February

FAC State Summit
Tallahassee, FL, USA
[floridaairports.org/meetings/
meetings.asp?id=54](http://floridaairports.org/meetings/meetings.asp?id=54)

4 - 6 February

MRO Middle East Conferences
Dubai, UAE
[events.aviationweek.com/current/
mme/](http://events.aviationweek.com/current/mme/)

5 - 6 February

Aircraft Interiors Middle East
Exhibition
Dubai, UAE
aime.aero/

5 - 7 February

CEO Forum & Winter Board of
Directors Meeting
Tucson, AZ, USA
aci-na.org/event/3644

Business Aircraft, Finance,
Registration & Legal Conference
St. Pete Beach, FL, USA
[web.nbaa.org/events/finance-
registration-legal-conference/2014/](http://web.nbaa.org/events/finance-registration-legal-conference/2014/)

8 February

WI Aviation Maintenance Training
& IA Renewal Seminar
Stevens Point, WI, USA
wisdotia2014.eventbrite.com

9 February

Embry-Riddle Aviation Symposium
Aircraft Financing & Leasing
Singapore, Singapore
aeropodium.com/afla.html

10 February

ATW's 40th Annual Airline Industry
Achievement Awards
Marina Square, Singapore
[atwonline.com/atws-40th-annual-
airline-industry-achievement-
awards](http://atwonline.com/atws-40th-annual-airline-industry-achievement-awards)

10 - 12 February

AAAE/IAAE North America/Pacific
Aviation Partnership Conference
Wellington, New Zealand
[events.aaae.org/sites/120203/index.
cfm](http://events.aaae.org/sites/120203/index.cfm)

11 - 12 February

EU-ASEAN Aviation Summit
Singapore, Singapore
[ec.europa.eu/transport/modes/air/
events/eu-asean-aviation-summit_
en.htm](http://ec.europa.eu/transport/modes/air/events/eu-asean-aviation-summit_en.htm)

11 - 16 February

Singapore Airshow
Changi, Singapore
[canso.org/cms/showpage.
aspx?id=4867](http://canso.org/cms/showpage.aspx?id=4867)

12 - 13 February

Aero Engines Americas
Fort Lauderdale, FL, USA
aeroenginesusa.com/

14 February

3rd International USCAS- US
Corporate Aviation Summit
Miami, FL, USA
aeropodium.com/uscas.html

16 - 18 February

FBO Expo/ Future of Business
Aviation Conference
London, UK
evaint.com/our-events

16 - 19 February

The Trinity Forum
Bangkok, Thailand
aci.aero/Events/2014/2/26/The-
Trinity-Forum-2014

17 - 19 February

CANSO Africa Safety Seminar
Uganda
canso.org/cms/showpage.
aspx?id=5247

Loyalty 2014

Amsterdam, The Netherlands.
flightglobalevents.com/loyalty14

18 - 19 February

11th Annual World Low Cost
Airlines Asia Pacific
Singapore, Singapore
terrapinn.com/conference/world-
low-cost-airlines-asia

18 - 20 February

NBAA Leadership Conference
Atlanta, GA, USA
web.nbaa.org/events/
leadership/2014/

19 - 21 February

ACC/AAAE Airport Planning, Design
and Construction Symposium
Denver, CO, USA
events.aaae.org/sites/140201/index.
cfm

23 - 25 February

IATA Legal Symposium
San Francisco, CA, USA
iata.org/events/Pages/legal-
symposium.aspx

Routes Americas

San Salvador, El Salvador
routesonline.com/events/166/routes-
americas-2014/

24 - 26 February

Airline Retail Conference Asia-
Pacific
Bangkok, Thailand
airlineretail.com/

Aircraft Maintenance Russia & CIS

Russia, Moscow
events.ato.ru/eng/events/mro

25 - 27 February

Abu Dhabi Air Expo: 3rd
Consecutive International
Exhibition of General Aviation
Abu Dhabi, UAE
adairexpo.com/

26 - 28 February

3rd ACI Airport Environmental
Seminar
Kuala Lumpur, Malaysia
aci.aero/Events

27 - 28 February

Central American & Caribbean
Aviation Conference
Panama City, Republic of Panama
aeropodium.com/panama.html

3 - 5 March

28th Annual Commercial Aviation
Industry Suppliers Conference
Beverly Hills, CA, USA
speednews.com/commercial-
aviation-industry-suppliers-
conference

Future Travel Experience Europe

London, UK
futuretravelexperience.com/fte-
europe/

4 - 5 March

Avionics International
Abu Dhabi, UAE
s36.a2zinc.net/clients/pennwell/
AVE2014/Public/Content.
aspx?ID=35305

4 - 6 March

National Airport Infrastructure
Show & Civil Aviation
Moscow, Russia
nais-russia.com/en/Home/

World ATM Congress

Madrid, Spain
worldatmcongress.org/

5 - 7 March

AAAE Airports Energy Efficiency
Forum
San Diego, CA, USA
events.aaae.org/sites/140303/

6 March

57th Annual Laureates Awards
Washington, DC, USA
events.aviationweek.com/current/
lau/

9 - 11 March

Routes Asia
Kuching, Sarawak, Malaysia
routesonline.com/events/167/routes-
asia-2014/

10 - 12 March

AAAE/IAAE Canada Conference:
The Evolution of the Airport & Air
Carrier Industry
Tucson, AZ, USA
events.aaae.org/sites/140302/index.
cfm

11 - 13 March

8th World Cargo Symposium
Los Angeles, CA, USA
iata.org/events/wcs/Pages/index.
aspx

12 - 13 March

Asia Pacific AVSEC
Canberra, Australia
informa.com.au/conferences/
transport-conference/aviation-
conference/aviation-security-
summit

12 - 14 March

ACI 6th Annual Economics &
Finance Conference
London, UK
aci-economics.com/

13 March

7th International Aircraft
Repossession
Johannesburg, South Africa
aeropodium.com/aircraftrepo.html